

WHAT IS CLAIMED IS:

1 1. An MPEG decoder comprising:

2 a packetized elementary stream (PES) interface capable of
3 receiving a plurality of packetized elementary streams associated
4 with a single video program;

5 a presentation time stamp (PTS) detection circuit capable
6 of detecting presentation time stamps in said packetized elementary
7 streams and extracting said presentation time stamps therefrom; and

8 a selection circuit capable of selecting presentation
9 time stamps associated with a first one of said plurality of
10 packetized elementary streams and transmitting said selected
11 presentation time stamps to a clock generation circuit, wherein
12 said clock generation circuit generates a first reference clock
13 signal used by a first decoder to decode said first packetized
14 elementary stream.

1 2. The MPEG decoder as set forth in Claim 1 wherein said
2 clock generation circuit further generates a second reference clock
3 signal synchronized to said first reference clock signal and
4 wherein said second reference clock signal is used by a second
5 decoder to decode a second packetized elementary stream in
6 synchronization with said first packetized elementary stream.

1 3. The MPEG decoder as set forth in Claim 2 wherein said
2 selected presentation time stamps are video presentation times
3 stamps and said first decoder is a video decoder.

1 4. The MPEG decoder as set forth in Claim 3 wherein said
2 second decoder is an audio decoder.

1 5. The MPEG decoder as set forth in Claim 2 wherein said
2 selected presentation time stamps are audio presentation times
3 stamps and said first decoder is an audio decoder.

6. The MPEG decoder as set forth in Claim 5 wherein said
second decoder is a video decoder.

7. The MPEG decoder as set forth in Claim 2 said clock
generation circuit generates said second reference clock signal by
3 synchronizing presentation time stamps associated with said second
4 packetized elementary stream with said selected presentation time
5 stamps associated with said first packetized elementary stream.

1 8. A digital video recorder capable of playing back a
2 recorded television program stored as packetized elementary
3 streams, said digital video recorder comprising:

4 a video processor capable of receiving an incoming
5 television program and converting said incoming television program
6 to a baseband video signal capable of being displayed on a
7 television set coupled to said digital video recorder;

8 a storage disk capable of storing said incoming
9 television program as packetized elementary streams during
10 recording; and

11 an MPEG decoder comprising:

12 a packetized elementary stream (PES) interface
13 capable of receiving a plurality of packetized elementary
14 streams associated with said recorded television program from
15 said storage disk during playback;

16 a presentation time stamp (PTS) detection circuit
17 capable of detecting presentation time stamps in said
18 packetized elementary streams and extracting said presentation
19 time stamps therefrom; and

20 a selection circuit capable of selecting
21 presentation time stamps associated with a first one of said
22 plurality of packetized elementary streams and transmitting

23 said selected presentation time stamps to a clock generation
24 circuit, wherein said clock generation circuit generates a
25 first reference clock signal used by a first decoder to decode
26 said first packetized elementary stream.

1 9. The digital video recorder as set forth in Claim 8
2 wherein said clock generation circuit further generates a second
3 reference clock signal synchronized to said first reference clock
4 signal and wherein said second reference clock signal is used by a
 second decoder to decode a second packetized elementary stream in
 synchronization with said first packetized elementary stream.

1 10. The digital video recorder as set forth in Claim 9
2 wherein said selected presentation time stamps are video
 presentation times stamps and said first decoder is a video
 decoder.

1 11. The digital video recorder as set forth in Claim 10
2 wherein said second decoder is an audio decoder.

1 12. The digital video recorder as set forth in Claim 9
2 wherein said selected presentation time stamps are audio
3 presentation times stamps and said first decoder is an audio
4 decoder.

1 13. The digital video recorder as set forth in Claim 12
2 wherein said second decoder is a video decoder.

1 14. The digital video recorder as set forth in Claim 9 said
2 clock generation circuit generates said second reference clock
3 signal by synchronizing presentation time stamps associated with
4 said second packetized elementary stream with said selected
5 presentation time stamps associated with said first packetized
6 elementary stream.

1 15. For use in a digital video recorder, a method for
2 decoding a television program stored in MPEG format:

3 receiving in an MPEG decoder a plurality of packetized
4 elementary streams associated with the stored television program;

5 detecting presentation time stamps in the packetized
6 elementary streams;

7 extracting the presentation time stamps from the
8 packetized elementary streams;

9 selecting presentation time stamps associated with a
10 first one of the plurality of packetized elementary streams; and

11 generating from the selected presentation time stamps a
12 first reference clock signal used by a first decoder to decode the
13 first packetized elementary stream.

14 16. The method as set forth in Claim 15 further comprising
15 the step of generating a second reference clock signal synchronized
16 to the first reference clock signal, wherein the second reference
17 clock signal is used by a second decoder to decode a second
18 packetized elementary stream in synchronization with the first
19 packetized elementary stream.

1 17. The method as set forth in Claim 14 wherein the selected
2 presentation time stamps are video presentation times stamps and
3 the first decoder is a video decoder.

1 18. The method as set forth in Claim 17 wherein the second
2 decoder is an audio decoder.

1 19. The method as set forth in Claim 16 wherein the selected
2 presentation time stamps are audio presentation times stamps and
3 the first decoder is an audio decoder.

1 20. The method as set forth in Claim 19 wherein the second
2 decoder is a video decoder.

1 21. The method as set forth in Claim 16 wherein the step of
2 generating a second reference clock signal comprises the sub-step
3 of synchronizing presentation time stamps associated with the
4 second packetized elementary stream with the selected presentation
5 time stamps associated with the first packetized elementary stream.